

AMENDMENTS TO THE CLAIMS

This listing of the claims replaces all prior versions, and listing of the claims, in this application.

Listing of the Claims

1 – 10. (Cancelled).

11. (Currently Amended) An implantable drug-delivery pump, comprising:

a pump housing having a reservoir adapted to retain a fluid therein;

a pump inlet port formed in the pump housing for delivering fluid to the reservoir;

a reservoir outlet port formed in the pump housing and adapted to receive fluid from the reservoir;

a driver mechanism effective to drive fluid from the reservoir to the reservoir outlet port;
and

a valve adapted to receive fluid from the reservoir outlet port, the valve including a multi-lumen member that has a first end coupled to the reservoir outlet port for receiving fluid flow from the reservoir and a second opposed end coupled to an outlet port for delivering fluid, the multi-lumen member being disposed within a valve housing having a restrictor member extending there across between opposed sidewalls thereof, the restrictor member being adapted to selectively restrict at least a portion of one or more lumens in the multi-lumen member to thereby adjust the flow rate of fluid flowing from the reservoir.

12. (Original) The implantable drug-delivery pump of claim 11, wherein the multi-lumen member comprises a multi-lumen capillary tube.

13. (Previously Presented) The implantable drug-delivery pump of claim 11, wherein the valve is disposed within the pump housing.

14. (Original) The implantable drug-delivery pump of claim 13, wherein the multi-lumen member comprises a multi-lumen capillary tube that includes a first end coupled to the reservoir outlet port for receiving fluid flow from the reservoir, and a second, opposed end coupled to a pump outlet port for delivering fluid to a fluid-delivery catheter.

15. (Previously Presented) The implantable drug-delivery pump of claim 11, wherein the valve is disposed within a fluid delivery catheter that is coupled to a pump outlet port formed in the pump housing and adapted to receive fluid from the reservoir outlet port.

16. (Original) The implantable drug-delivery pump of claim 15, wherein the multi-lumen member comprises a multi-lumen capillary tube that includes a first end coupled to the pump outlet port, and a second, opposed end coupled to the fluid delivery catheter for delivering fluid to a patient.

17. (Previously Presented) The implantable drug-delivery pump of claim 11, wherein the multi-lumen member comprises a multi-lumen capillary tube, and wherein the restrictor member comprises a flexible membrane disposed adjacent to one of a first end or a second end of the capillary tube.

18. (Original) The implantable drug-delivery pump of claim 17, further comprising an actuator mechanism for applying pressure to the flexible membrane to selectively restrict at least a portion of one or more lumens in the capillary tube.

19. (Previously Presented) The implantable drug-delivery pump of claim 18, wherein the actuator mechanism comprises a mechanical or electromechanical member.
20. (Previously Presented) The implantable drug-delivery pump of claim 17, wherein the flexible membrane is expandable to selectively restrict at least a portion of one or more lumens in the capillary tube.
21. (Previously Presented) The implantable drug-delivery pump of claim 17, wherein the flexible membrane is coupled to the valve housing to form a balloon-like structure such that the flexible membrane is inflatable to selectively restrict at least a portion of one or more lumens in the capillary tube.
22. (Original) The implantable drug-delivery pump of claim 21, further comprising a hydraulic pump coupled to the flexible membrane and effective to selectively inflate and/or deflate the flexible membrane.
23. (Original) The implantable drug-delivery pump of claim 11, further comprising an orifice disposed downstream of the valve and in fluid communication with the valve, the orifice including a differential pressure sensor that is effective to measure the flow rate of fluid through the orifice.
- 24 - 32 (Cancelled).
33. (New) An implantable drug-delivery pump, comprising:
- a pump housing having a reservoir adapted to retain a fluid therein;
 - a pump inlet port formed in the pump housing for delivering fluid to the reservoir;
 - a reservoir outlet port formed in the pump housing and adapted to receive fluid from the

reservoir;

a driver mechanism effective to drive fluid from the reservoir to the reservoir outlet port;
and

a valve adapted to receive fluid from the reservoir outlet port, the valve including a multi-lumen member disposed within a valve housing and adapted to receive fluid flow in one direction therethrough, the valve housing having a restrictor member extending there across between opposed sidewalls thereof, the restrictor member being adapted to selectively restrict at least a portion of one or more lumens in the multi-lumen member to thereby adjust the flow rate of fluid flowing from the reservoir.

34. (New) The implantable drug-delivery pump of claim 33, wherein the multi-lumen member comprises a multi-lumen capillary tube, and wherein the restrictor member comprises a flexible membrane disposed adjacent to one of a first end or a second end of the capillary tube.

35. (New) The implantable drug-delivery pump of claim 34, further comprising an actuator mechanism for applying pressure to the flexible membrane to selectively restrict at least a portion of one or more lumens in the capillary tube.

36. (New) The implantable drug-delivery pump of claim 34, wherein the flexible membrane is expandable to selectively restrict at least a portion of one or more lumens in the capillary tube.

37. (New) The implantable drug-delivery pump of claim 33, further comprising an orifice disposed downstream of the valve and in fluid communication with the valve, the orifice including a differential pressure sensor that is effective to measure the flow rate of fluid through the orifice.

38. (New) The implantable drug-delivery pump of claim 33, wherein the valve is disposed within the pump housing.

39. (New) The implantable drug-delivery pump of claim 33, wherein the valve is disposed within a fluid delivery catheter that is coupled to a pump outlet port formed in the pump housing and adapted to receive fluid from the reservoir outlet port.